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(54) METHOD AND DEVICE FOR VOICE RECOGNITION AND PROGRAM  
SPECIFYING DEVICE USING THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To improve voice recognition performance by narrowing down object vocabularies to be recognized through less user operation according to the preference of a user.

SOLUTION: A preference select information input part 15, a number determination part 16, and a preference information storage part 3 are provided and according to the input from the preference select information input part 15, a recognized object

vocabulary generation part 5 generates a recognized object vocabulary on which the preference of the user from a recognized object candidate vocabulary storage part 4 is reflected based on preference information stored in the preference information storage part corresponding to a preference number determined by the number determination part 16; and a recognition part 6 totalizes the voice recognition scores of the voice inputted from the voice input part 15 and the recognized object vocabulary to determine a recognition result. The preference information is generated from an electronic program guide and a program specification signal is outputted as a recognition result to a connected set top box 8.

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2.\*\*\*\* shows the word which can not be translated.

3.In the drawings, any words are not translated.

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#### CLAIMS

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[Claim(s)]

[Claim 1] The speech recognition approach characterized by creating beforehand the vocabulary for recognition based on a user's taste information beforehand acquired

from the candidate vocabulary for recognition which stored all the words that should be made the object of speech recognition, and recognizing a word from the voice and the vocabulary for recognition which are inputted.

[Claim 2] A user's taste information is the speech recognition approach according to claim 1 characterized by generating by learning using liking or disagreeable at least one from an electronic program guide.

[Claim 3] The speech recognition approach according to claim 1 or 2 characterized by determining a recognition result using the taste score of the vocabulary for recognition based on a user's taste information acquired beforehand, and the distance acquired by speech recognition.

[Claim 4] The taste selection information input section which inputs the information for determining the taste number which indicates a user's taste to be the voice input section which inputs the voice which a user utters, The number decision section which determines the taste number for the user who uses now in response to the input from said taste selection information input section, The taste information storage section holding one or more taste information, and the candidate lexical storage section for recognition which stores all the words that should be made the object of speech recognition, The lexical creation section for recognition which creates the vocabulary for recognition from the candidate vocabulary for recognition which chooses the taste information stored in said taste information storage section by the taste number, and is memorized by said candidate lexical storage section for recognition based on the selected taste information, The recognition section which performs recognition score count with the voice inputted from said voice input section, and the vocabulary for recognition created in said lexical creation section for recognition, The voice recognition unit characterized by having the recognition result decision section which determines and outputs a recognition result based on the recognition score calculated in said recognition section.

[Claim 5] The number decision section is a voice recognition unit according to claim 4 which the input from the taste selection information input section is user ID, and is characterized by outputting a user number to said number decision section.

[Claim 6] The number decision section is a voice recognition unit according to claim 4 which the input from the taste selection information input section is time amount, and is characterized by outputting a time zone number to said number decision section.

[Claim 7] The taste selection information input section which inputs the information for determining the taste number which indicates a user's taste to be the voice input section which inputs the voice which a user utters, The sound template storage section which memorizes two or more sound templates, The sound template selection section which chooses the sound template which calculates a speech recognition score with all the sound templates memorized by the convention speech sound voice inputted from said voice input section, and said sound template storage section, and

gives the highest score, The number decision section which determines a taste number from the sound template which memorized the correspondence relation of the taste information memorized by the sound template memorized by said sound template storage section and said taste information storage section, and was chosen, The taste information storage section holding one or more taste information, and the candidate lexical storage section for recognition which stores all the words that should be made the object of speech recognition, The lexical creation section for recognition which creates the vocabulary for recognition from the candidate vocabulary for recognition which chooses the taste information stored in said taste information storage section by the taste number, and is memorized by said candidate lexical storage section for recognition based on the selected taste information, The recognition section which performs recognition score count with the voice inputted from said voice input section, and the vocabulary for recognition created in said lexical creation section for recognition, The voice recognition unit characterized by having the recognition result decision section which determines and outputs a recognition result based on the recognition score calculated in said recognition section.

[Claim 8] The voice recognition unit according to claim 7 characterized by to create the vocabulary for recognition from the candidate vocabulary for recognition which chooses two or more sound templates in said sound template selection section, determines two or more taste numbers in said number decision section, unifies the contents of two or more taste information in said lexical creation section for recognition, and is memorized by said candidate lexical storage section for recognition.

[Claim 9] The voice recognition unit according to claim 4 carry out having the recognition result decision section give taste weight about the vocabulary for recognition, have the taste score creation section which score-izes taste weight, carry out the taste score created in the speech-recognition score calculated in said recognition section, and said taste score creation section as an input by considering the selected taste information as an input in said lexical creation section for recognition, and determine a recognition result as the description.

[Claim 10] Program assignment equipment characterized by carrying out program assignment to either of claims 4-7 using the voice recognition unit of a publication.

[Claim 11] A user's taste information is program assignment equipment according to claim 10 characterized by generating by the study approach chosen more from an electronic program guide liking or disagreeable.

[Claim 12] A user's taste information is program assignment equipment according to claim 9 characterized by being provided by the electronic program guide and having at least one of the \*\*\*, time zone, genre, performer or performance group name, program name, contents of program, theme, music, contents keyword, and user name \*\*s as a component.

[Claim 13] Program assignment equipment given in either of claims 10-12

characterized by urging the input of taste at the time of the interruption by the distribution side of a program, or program termination at the time of interruption by the viewing-and-listening side of a program in case the taste information on a program is learned.

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is concerned with the speech recognition approach of making a user's taste reflecting in selection of the vocabulary for recognition and a voice recognition unit, and the program assignment equipment that used it for the list.

[0002]

[Description of the Prior Art] The dictionary file of the genre which two or more words set as the object of speech recognition at JP,7-319494,A are divided [ genre ] into two or more genres defined beforehand, are memorized [ genre ], and makes them recognize beforehand as a conventional technique which creates the vocabulary for recognition dynamically for example is developed in dictionary memory.

[0003] The block diagram of the conventional voice recognition unit is shown in drawing 5 , and it explains below. divide two or more words set as the object of speech recognition before starting speech recognition into two or more genres defined beforehand, memorize as a word set 50, extract the voice description, look like [ a dictionary file 52 ] two or more word sets 50, make it memorize by the dictionary generation section 51, and the dictionary load section 53 loads the dictionary file 52 the dictionary load directions section 54 was instructed to be to dictionary memory 55 before voice input.

[0004] As for the voice inputted from the microphone 56, the voice description is extracted by the voice feature-extraction section 57, and the comparison collating section 58 carries out comparison collating of the voice description and the voice description from the dictionary memory 55 by which input voice was carried out, and outputs the word to input voice as a recognition result.

[0005]

[Problem(s) to be Solved by the Invention] However, it was necessary to repeat loading for a dictionary file, whenever the genre which the vocabulary for recognition

did not restrict with what was considered as the intention of a user since it was created according to the genre defined beforehand, but was defined further changes even if it uses these conventional techniques, and in order to obtain the speech recognition result of having suited the intention of a user, technical problems, like user actuation increases occurred.

[0006] This invention aims at aiming at improvement for the speech recognition engine performance by narrowing down the vocabulary for recognition by little user actuation according to a user's taste.

[0007]

[Means for Solving the Problem] In order to solve this technical problem, this invention takes the approach characterized by creating beforehand the vocabulary for recognition based on a user's taste information beforehand acquired from the candidate vocabulary for recognition which stored all the words that should be made the object of speech recognition, and recognizing a word from the voice and the vocabulary for recognition which are inputted.

[0008] Moreover, the voice input section for this invention to input into equipment the voice which a user utters, The taste selection information input section for inputting the information for choosing a user's taste information, The number decision section which determines the taste number which shows a user's taste information, and the taste information storage section holding one or more taste information, The candidate lexical storage section for recognition which stores all the words that should be made the object of speech recognition, The lexical creation section for recognition which creates the vocabulary for recognition based on the taste information to refer to from the candidate vocabulary for recognition which refers to the taste information stored in said taste information storage section according to a taste number, and is memorized by said candidate lexical storage section for recognition, It has the recognition section which calculates the speech recognition score of the voice inputted from said voice input section, and the vocabulary for recognition created in said lexical creation section for recognition, and the recognition result decision section which determines a recognition result based on the score calculated in said recognition section.

[0009] The vocabulary for recognition which includes by this the word which a user means is chosen, there are few errors than the conventional example, and when it is many more, the speech recognition approach and voice recognition unit which can output the result which a user means can be offered.

[0010]

[Embodiment of the Invention] Invention of this invention according to claim 1 is characterized by to create beforehand the vocabulary for recognition based on a user's taste information beforehand acquired from the candidate vocabulary for recognition which stored all the words that should be made the object of speech

recognition , and to recognize a word from the voice and the vocabulary for recognition inputted , and has an operation of raising the speech-recognition engine performance , by narrowing down the vocabulary for recognition according to a user's taste . Moreover, processing is simple and is the approach of becoming early rather than it performs speech recognition for all the vocabularies that can serve as a candidate for recognition.

[0011] Invention according to claim 2 has an operation that taste can be learned without applying a burden to a user, in the speech recognition approach according to claim 1 by being characterized by generating a user's taste information by learning using liking or disagreeable at least one from an electronic program guide, being concerned with study of the taste information on this invention, and using liking or disagreeable simple alternative. Furthermore, taste information can be learned liking or by using study using \*\*\*, without spoiling the \*\*\*\*\* of voice actuation, and the simple nature of handling.

[0012] Invention according to claim 3 is set to the speech recognition approach according to claim 1 or 2. It is what is characterized by determining a recognition result using the taste score of the vocabulary for recognition based on a user's taste information acquired beforehand, and the distance acquired by speech recognition. By seasoning the score of speech recognition also with the score of taste, weight is given to the contents which a user is likely to utter more, and a result is outputted, and it has the operation of making the result to mean appear in a high probability at the same time it reduces sharply the case where the result which a user does not mean at all is made to appear.

[0013] The voice input section which invention according to claim 4 is recognition equipment which narrows down the word for recognition doubled with a user's taste from all the words that should be made the object of speech recognition, and performs speech recognition, and inputs the voice which a user utters, The taste selection information input section which inputs the information for determining the taste number which shows a user's taste, The number decision section which determines the taste number for the user who uses now in response to the input from said taste selection information input section, The taste information storage section holding one or more taste information, and the candidate lexical storage section for recognition which stores all the words that should be made the object of speech recognition, The lexical creation section for recognition which creates the vocabulary for recognition from the candidate vocabulary for recognition which chooses the taste information stored in said taste information storage section by the taste number, and is memorized by said candidate lexical storage section for recognition based on the selected taste information, The recognition section which performs recognition score count with the voice inputted from said voice input section, and the vocabulary for recognition created in said lexical creation section for recognition, It is the thing

equipped with the recognition result decision section which determines and outputs a recognition result based on the recognition score calculated in said recognition section, and has an operation of raising the speech recognition engine performance, by narrowing down the vocabulary for recognition according to a user's taste.

[0014] Invention according to claim 5 is set to a voice recognition unit according to claim 4. The number decision section It is what the input from the taste selection information input section is user ID, and is characterized by outputting a user number to said number decision section. By choosing from one or more taste information the taste information used for the lexical selection for recognition, it has an operation of raising the speech recognition engine performance, by narrowing down the vocabulary for recognition according to a user's taste.

[0015] In a voice recognition unit according to claim 4, the input from the taste selection information input section to the number decision section is time amount, and invention according to claim 6 is what is characterized by outputting a time zone number to said number decision section. In case two or more taste information is chosen, by using a hour entry, it has an operation of raising the speech recognition engine performance, by narrowing down the vocabulary for recognition according to the taste of a user's time zone concerned.

[0016] The voice input section which inputs the voice to which a user utters invention according to claim 7, The taste selection information input section which inputs the information for determining the taste number which shows a user's taste, The sound template storage section which memorizes two or more sound templates, The sound template selection section which chooses the sound template which calculates a speech recognition score with all the sound templates memorized by the convention speech sound voice inputted from said voice input section, and said sound template storage section, and gives the highest score, The number decision section which determines a taste number from the sound template which memorized the correspondence relation of the taste information memorized by the sound template memorized by said sound template storage section and said taste information storage section, and was chosen, The taste information storage section holding one or more taste information, and the candidate lexical storage section for recognition which stores all the words that should be made the object of speech recognition, The lexical creation section for recognition which creates the vocabulary for recognition from the candidate vocabulary for recognition which chooses the taste information stored in said taste information storage section by the taste number, and is memorized by said candidate lexical storage section for recognition based on the selected taste information, The recognition section which performs recognition score count with the voice inputted from said voice input section, and the vocabulary for recognition created in said lexical creation section for recognition, It is the thing equipped with the recognition result decision section which determines and outputs a recognition result



based on the recognition score calculated in said recognition section. By using utterance of a user, choosing the sound template nearest to utterance, and choosing taste information based on correspondence relation with a sound template, in case one or more taste information is chosen A user's taste is chosen automatically and it has an operation of raising the speech recognition engine performance, by narrowing down the vocabulary for recognition according to a user's taste.

[0017] In a voice recognition unit according to claim 7, invention according to claim 8 chooses two or more sound templates in said sound template selection section, and determines two or more taste numbers in said number decision section. It is what is characterized by creating the vocabulary for recognition from the candidate vocabulary for recognition which unifies the contents of two or more taste information in said lexical creation section for recognition, and is memorized by said candidate lexical storage section for recognition. By calculating the weight by the speech recognition score to each template by choosing two or more sound templates comparatively near utterance of a user, when in-between utterance is inputted Narrowing down is performed in the vocabulary for recognition which agreed by a user's taste, and it has an operation of raising the speech recognition engine performance.

[0018] Invention according to claim 9 gives taste weight about the vocabulary for recognition in a voice recognition unit according to claim 4 by considering as an input taste information chosen in said lexical creation section for recognition. It is the thing carry out having the taste score creation section which score-izes taste weight, and having the recognition result decision section which determines a recognition result by considering as an input the taste score created in the speech recognition score calculated in said recognition section, and said taste score creation section as the description. By also considering the taste score created from taste information, and determining a recognition result, the vocabulary for recognition is narrowed down and boiled according to a user's taste, and it has an operation of raising the speech recognition engine performance more.

[0019] Invention according to claim 10 is [ digital television broadcasting and ] on demand about a voice recognition unit given in either of claims 4-7. It is what was applied to the program assignment equipment when using a movie / karaoke distribution service, and has an operation that program selection which suited a user's taste can be performed.

[0020] It has an operation that study which suited a user's taste easily can be performed, by characterizing invention according to claim 11 by generating a user's taste information in program assignment equipment according to claim 10 by the study approach chosen more from an electronic program guide liking or disagreeable, and using liking or disagreeable alternative selection for study of taste information.

[0021] Invention according to claim 12 is set to program assignment equipment

according to claim 9. A user's taste information is offered by the electronic program guide. \*\*\*, a time zone, a genre, They are a performer or a performance group name, a program name, the contents of a program, a theme, music, a contents keyword, and the thing characterized by having at least one of the user name \*\*s as a component. By specifying and offering the contents of taste information, it has an operation that program selection which suited a user's taste more can be performed.

[0022] Invention according to claim 13 is set to program assignment equipment given in either of claims 10-12. In case the taste information on a program is learned, it is what is characterized by urging the input of taste at the time of the interruption by the distribution side of a program, or program termination at the time of interruption by the viewing-and-listening side of a program. In case equipment learns taste information from a user, it has an operation that program selection which suited a user's taste more can be performed, by aiming at the break of a program etc. and asking taste positively.

[0023] Below, the gestalt of operation of this invention is explained using drawing.

[0024] (Gestalt 1 of operation) The block block diagram of the program assignment equipment in the gestalt 1 of the operation of this invention to drawing 1 is shown.

[0025] The voice input section into which 1 inputs a user's voice in drawing 1 , the taste information creation section in which 2 creates taste information, The taste information storage section holding the taste information by which 3 was created in the taste information creation section 2, The candidate lexical storage section for recognition 4 has remembered the object vocabulary of speech recognition, and all the vocabularies that can become to be, The lexical creation section for recognition which draws up the lexical dictionary for recognition which 5 chose the vocabulary which suited taste from the vocabularies for recognition memorized by the candidate lexical storage section 4 for recognition, and was set by a user's taste, The recognition section which calculates a speech recognition score with the vocabulary for recognition from the voice into which 6 was inputted from the voice input section 1, and the lexical creation section 5 for recognition, The recognition result decision section which finally outputs the recognition score when 7 was obtained in the recognition section 6, The set top box which determines the following request-to-receipt item in response to the signal with which 8 was decided by the recognition result decision section 7, The digital television broadcasting to which 9 transmits television broadcasting and an electronic program guide, and 10 distribution service of a movie, karaoke, etc. A line arm on-demand movie / karaoke distribution service, The taste selection information input section which inputs information for 11 to choose taste information from the inside when the taste information video and 12 are memorized by the display monitor and 15 is remembered to be by the taste information storage section 3 is plurality, 16 is the number decision section which outputs a taste number in response to the input from the taste selection information

input section 15.

[0026] Actuation of the program selecting arrangement constituted as mentioned above is explained below. First, a set top box 8 shall send to the candidate lexical storage section 4 for recognition about a program name at the same time the power source is always switched on, and it will receive the information about a program name and a program receivable from an on-demand movie / karaoke distribution service 10 once on the 1st and memorizes it inside said set top box 8.

[0027] The taste selection information inputted into the taste selection information input section 15 is the user number which a user inputs with the carbon button of the remote control which accompanies equipment, or time information outputted from a built-in clock, and is the information for choosing as the taste information storage section 3 the taste information by which two or more storage is carried out.

[0028] The number decision section 16 outputs a taste number along the table having shown in (Table 1) and (Table 2) in response to the input from said taste selection information input section 15 based on the taste selection information inputted into said taste selection information input section 15.

[0029]

[Table 1]

[0030]

[Table 2]

[0031] In addition, even when the number of the taste information memorized by said taste information storage section 3 is one, there is no change in the effectiveness of the gestalt of operation, and when the number of the taste information memorized by said taste information storage section 3 is one, said taste selection information input section 15 is always continuing taking out the same signal irrespective of an input.

[0032] The lexical creation section 5 for recognition pulls out taste information from the taste information storage section 3 based on the taste number from said number decision section 16, and draws up the lexical dictionary for recognition which chose the vocabulary which suited taste from the vocabularies for recognition memorized by the candidate lexical storage section 4 for recognition, and was set by a user's taste.

In the lexical creation section 5 for recognition, mark attachment is performed from the taste information stored in the taste information storage section 3 to a word, and a word with mark higher than a threshold is chosen using a mark threshold.

[0033] In addition, the number of words is decided beforehand, and the same effectiveness is acquired even when choosing the number of words regular from the direction of a high order.

[0034] In this way, a user specifies a program name to choose from an on-demand movie / karaoke distribution service 10 from the voice input section 1 with voice to the equipment currently prepared.

[0035] The recognition section 6 carries out speech recognition to the voice inputted from the voice input section 1 to the lexical dictionary for recognition set by a user's taste by which selection creation was carried out, and calculates a speech recognition score. The recognition result decision section 7 receives the recognition score obtained in the recognition section 6, and the signal finally outputted determines it.

[0036] A set top box 8 determines the following request-to-receipt item in response to the signal decided by the recognition result decision section 7 <TXF FR=0001 HE=110 WI=080 LX=0200 LY=0300>. Here, here, the set top box 8 advanced request to receipt to an on-demand movie / karaoke distribution service 10, or has played the role which sends the received image and voice to the display monitor 12.

[0037] this configuration -- the menu which can distribute an on-demand movie / karaoke distribution service 10 -- comparing -- a No. millions set -- even when it is, the voice recognition unit which narrowed down the vocabulary for speech recognition according to a user's taste is used, by making voice selection of the program which carries out request to receipt, as compared with the program selected system which does not narrow down an object vocabulary, it can restate and a request-to-receipt program can be chosen as the inside of a short time that there is nothing.

[0038] In addition, the vocabulary for recognition memorized by the candidate lexical storage section 4 for recognition is the electronic program guide transmitted from digital television broadcasting 9, the program information which a set top box 8 receives from the outside is the electronic program guide broadcast by digital television broadcasting 9, and the same effectiveness is acquired even if the contents of a demand which the object which advances a demand takes out with video 11 are image transcription reservation.

[0039] The study approach in the taste information creation section 2 uses the information filter using the input a user hates [ liking and ], and the study approach of JP,9-288683,A is learned. The flow chart of taste study is shown in drawing 2 , and the study approach in the taste information creation section 2 is explained below.

[0040] The taste judging step which judges the taste reaction from a user about the recognition step to which S01 performs a user's voice-input step, and S02 performs recognition score count of user voice, the recognition result decision step to which

S03 performs a score comparison, the program viewing-and-listening step which view and listen to a program in accordance with the recognition result it was decided that S04 will be, and the program to which S05 views and listens, and S06 are the taste study step learn taste in accordance with the judged contents.

[0041] Voice input by the user is performed by S01, and speech recognition is performed by S02. The result of speech recognition is determined by S03, and it views and listens to the program determined by S03 in S04. In S05, taste according to the action of the user who is viewing and listening to a program is judged. That is, if a channel is changed before 10 minutes pass, a user will judge it as what was not pleasing, will attach a "disagreeable" sign to the word given to the electronic program guide of (Table 3) of the program concerned, and will hand the program concerned to the taste study step S06.

[0042]

[Table 3]

[0043] For example, if it becomes viewing and listening as continued even if 10 minutes pass, the program concerned will judge that the user was pleased, will attach the sign of "liking" to the word given to the electronic program guide of (Table 3) of the program concerned, and will pass it to the taste study step S06. At the taste study step S06, taste is learned in accordance with the contents judged at the taste decision step S05.

[0044] in addition, the time of the first interruption, such as broadcast according to interruption of the commercials in a program, news, etc., -- or How was the present program? Please answer by liking and disagreeable either. the time of viewing-and-listening termination of changing a channel, a program finishing -- from a set top box side -- "-- " is asked and the same effectiveness is acquired also by the approach of sending to the taste information creation section 2 as the reply information "he liking" acquired about the word given to the electronic program guide of (Table 3), or "disagreeable" 1 affair.

[0045] (Gestalt 2 of operation) The block block diagram of the program assignment equipment in the gestalt 2 of the operation of this invention to drawing 3 is shown. The program assignment equipment explained with the gestalt 2 of operation changes the

program assignment equipment of the gestalt 1 of operation partially, and explains a different part from the configuration of the gestalt 1 of operation.

[0046] Two or more taste information is memorized by the taste information storage section 3. In order to decide which taste information is chosen since the taste information memorized by the taste information storage section 3 is plurality, the thing near utterance of a user inputted from the voice input section 1 is chosen from two or more sound templates memorized by the sound template storage section 13 in the sound template selection section 14.

[0047] In the case of the equipment of the gestalt 2 of operation, utterance for choosing a sound template is the word "program." The sound template selection section 14 is awaiting the regular word "program", and chooses utterance of a user and the nearest sound template by the radical of the premise of having been uttered correctly. In the sound template selection section 14, 1 word recognition processing is performed to all sound templates, and what has the highest score is chosen. In this way, the selected sound template number is used for the number decision of the taste information associated in (Table 4) in the number decision section 16.

[0048]

[Table 4]

[0049] The taste information number decided by the number decision section 16 is sent to the lexical creation section 5 for recognition, and specifies the taste information pulled out from two or more taste information memorized by the taste information storage section 3.

[0050] In addition, the information for determining a taste number in the number decision section 16 considers as the configuration inputted not from the sound template number decided in the sound template selection section 14 but from the taste selection-information input section 15, and the same effectiveness is acquired, even if it judges a user number using a user's face image in the taste information input section 15 and it determines a taste number based on delivery, and (Table 2) to the number decision section 16.

[0051] Moreover, the information for determining a taste number in the number decision section 16 As time of day which considers as the configuration inputted not from the sound template number decided in the sound template selection section 14 but from the taste selection information input section 15, and is obtained from the clock of built-in of the input to the taste selection information input section 15 In the time zone number which set in said taste selection information input section 15, and

was judged and judged in the time zone number, even if it determines a taste number as the number decision section 16 based on delivery (Table 2), the same effectiveness is acquired.

[0052] (Gestalt 3 of operation) The block block diagram of the program assignment equipment in the gestalt 3 of the operation of this invention to drawing 3 is shown. The program assignment equipment explained with the gestalt 3 of operation changes the program assignment equipment of the gestalt 1 of operation partially, and explains a different part from the gestalt 1 of operation.

[0053] Utterance of a user is inputted into equipment from the voice input section 1, speech recognition processing is performed in the recognition section 6, and a recognition score is sent to the recognition result decision section 7. The ingredient for determining a recognition result here considering not only the recognition score by speech recognition but the taste score when it is determined from a user's taste information, and being decided differs from the gestalt 1 of operation.

[0054] The vocabulary used for speech recognition in the recognition section 6 attaches a score to a word in the lexical creation section 5 for recognition based on the taste information memorized by the taste information storage section 3 out of all the words memorized by the candidate lexical storage section 4 for recognition, and the word of a high order is chosen rather than a mark threshold. The numeric value beforehand made into the mark threshold from the mark of each word in the taste score count section 17 about the score of the word chosen as the vocabulary for recognition among the scores based on the taste information given at the time of selection is deducted, it recalculates so that the minimum taste score may be set to 0, and it sends to the recognition result decision section 7.

[0055] In the recognition result decision section 7, after adding together the recognition score of the speech recognition received from the recognition section 6, and the taste score received from the taste score count section 18, it outputs to a set top box 8 by making into the final result what has the highest score.

[0056] In addition, in the taste score count section 18, even if it performs normalization processing instead of performing processing which deducts constant value from a taste score, the same effectiveness is acquired.

[0057]

[Effect of the Invention] The advantageous effectiveness raise the speech-recognition engine performance is acquired by being characterized by to create beforehand the vocabulary for recognition based on a user's taste information which acquired from the candidate vocabulary for recognition which stored all the words that should be made the object of voice recognition beforehand, and to recognize a word from the voice and the vocabulary for recognition which are inputted according to this invention, and narrowing down the vocabulary for recognition by little user actuation according to a user's taste.

[0058] Moreover, when it applies to program assignment equipment, the advantageous effectiveness that program selection which suited a user's taste can be performed is acquired.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The block block diagram of the program selecting arrangement in the gestalt 1 of operation of this invention

[Drawing 2] The flow chart of taste study of the gestalt 1 of operation

[Drawing 3] The block block diagram of the program selecting arrangement in the gestalt 2 of operation of this invention

[Drawing 4] The block block diagram of the program selecting arrangement in the gestalt 3 of operation of this invention

[Drawing 5] The block block diagram of the conventional voice recognition unit

[Description of Notations]

- 1 Voice Input Section
- 2 Taste Information Creation Section
- 3 Taste Information Storage Section
- 4 Candidate Lexical Storage Section for Recognition
- 5 Lexical Creation Section for Recognition
- 6 Recognition Section
- 7 Recognition Result Decision Section
- 8 Set Top Box
- 9 Digital Television Broadcasting
- 10 On Demand Movie / Karaoke Distribution Service
- 11 Video
- 12 Display Monitor
- 13 Sound Template Storage Section
- 14 Sound Template Selection Section
- 15 Taste Selection Information Input Section
- 16 Number Decision Section
- 17 Taste Score Count Section